

STORAGE CONTAINERS AND ORGANIZERS FOR LAZY SUSANS

BACKGROUND OF THE INVENTION

Field of the Invention

The present invention relates to Lazy Susans for use in kitchen and household applications. More specifically, the invention relates to storage containers and organizer systems used in combination with storage containers to enhance the convenience and efficiency of Lazy Susan products.

Description of the Related Art

Lazy Susans have become, over the last several decades, a staple item in the kitchen and household area. Generically, Lazy Susans in various forms have been extremely useful in kitchen cabinetry where they have been used in ways that have increased the utility of the storage space and improved the convenience for storing and retrieving goods.

Improvements to Lazy Susans in general have focused on the hardware and installation techniques, mainly as ways to improve the functional performance of the Lazy Susan product. There have been, however, few improvements directed towards the usage of space that is defined by the Lazy Susan product itself. Since the circular shelves have proven to be the most efficient design for Lazy Susans, there is somewhat a natural inefficiency with attempts to store the normal types of sundry items that are found in the average kitchen, specifically square or rectangular boxes do not fit well onto the conventional Lazy Susan shelf.

Attempts to improve the situation resulted in advances such as those proposed by Flory in U.S. Patent No. 5,335,804 where a specialized container for Lazy Susan application is disclosed. The canister of Flory is specially designed to accommodate both the center hub area and the outer radius configuration of the Lazy Susan shelf. As a result, the Flory canister is

centered on a design that has a blunted forward end that allows the unit to maximize the amount of storage space that the container can occupy.

By contrast, and as distinguished in Flory, the Prophet Jr. et al. concept, U.S. Patent No. 4,483,455, teaches the use of a canister that has a generally triangular shape (so-called
5 sector shape) that compatibly nests in with other similar shaped containers on a circular shelf.

Unlike Flory, Prophet Jr. does not seek to maximize the efficiency of the storage canister insofar as consuming all the space that may be allowed on a circular shelf, but looks to the convenience of the triangular shape as a configuration for a storage container. This storage container can be used in conjunction with a series of radial fingers that project from the center of the shelf that
10 help to orient and stabilize the containers once they are placed on the shelf.

Notwithstanding the foregoing, there has remained a long felt problem in the industry with respect to the ease of using storage canisters that can be placed on Lazy Susans. For instance, neither Flory nor Prophet Jr. teaches a canister that can be easily accessed by the user. The rear-portions of the canisters tend to be wider than the front, thus making handling and
15 gripping the prior art containers a difficult task.

Additionally, containers of this type tend to have a fairly tall profile relative to the footprint of their base. This places the center of gravity quite high and leads to the potential for tipping.

It is further observed that the containers in the prior art are utilized as discreet
20 containment units. They have a solid top that snaps into place, which requires removal if access to the contents of the canister is required. This results in a continued requirement to open and close the whole top of each such canister which is a nuisance to the end user, increasing the potential for spilling the contents of the container, or losing or misplacing the top.

As will be seen below, the present invention solves many of the problems that have remained with respect to the usage of storage containers on Lazy Susans.

SUMMARY OF THE INVENTION

A new container and organizer system for Lazy Susan applications, in accordance
5 with the present invention, provides for a sector-shaped container that includes a handle portion for easy accessibility and handling. Said sector-shaped container also includes a removable lid that has a spout that can be opened for the convenient dispensing of the contents of the container.

The present invention also comprises an organizer system that is mountable onto a
Lazy Susan product, and which comprises a number of radial fins that are vertically oriented and
10 which are compatible with the segregation of the sector-shaped containers onto discreet positions on the Lazy Susan shelf. The radially projecting fins of the present invention resist the tendency of the storage containers to tip whenever the Lazy Susan shelf is rotated.

Another aspect of the present invention is the usage of sector-shaped containers in
smaller heights that still retain attributes of the present invention, such as the handle portion and
15 the spout, but which can be stacked one on top of the other for increased utility.

It is at least one object of the present invention to provide storage containers that
can be used separately on Lazy Susan applications while retaining many of the benefits of the
present concept. It is also another object of the present invention to provide a storage organizer
system that can be mounted onto a Lazy Susan product at the time of installation or as an after-
20 market accessory.

In accordance with the invention, a system is adapted for use with an article
having Lazy Susan-like properties. The article has a support and at least one shelf for removable
storage of materials. The system comprises segregating means removably coupled to the article

and projecting radially outward above the shelf for segregating a surface of the shelf into a plurality of sectors.

In accordance with one aspect of the invention, the segregating means includes a series of radially projecting fins. The projecting fins are of a height sufficient so as to resist tipping of storage containers located on the sectors. In addition, the system includes a fin holder located adjacent the support for securing the fins at one end thereof. The fin holder includes means for releasing the fins from the fin holder.

More specifically, the fin holder includes a central body and a series of vertical receivers located at spaced intervals along a length of the body. A receiver rib is located on an interior side of each of the vertical receivers. A series of web portions is located between the vertical receivers. The web portions collectively connect to the vertical receivers to form the body of the fin holder.

The fin holder also includes at least one latch. The latch includes first and second latch components. The latch components include projections emanating from respective ones of the vertical receivers. At least one lock having means for affirmative engagement in combination with the latch components is provided. The lock and the first and second latch components are all located at a web end.

When the fin holder is in an open position, the web ends can be brought together so that the first and second latch components engage. The lock retains the latch components in the engaged condition. With this configuration, the fin holder is in a closed, tubular construction formed with a center. The center includes a through hole of a diameter which is compatible with installation onto the support of the article.

The angles along the shelf defined by the fins, when installed in the fin holder, are set by the spacing of the vertical receivers on the fin holder. Each of the fins includes a fin mount. The fin holder is adapted to receive the fin mounts of the fins. Outer ends of each of the fins engage lips located along the perimeter of the shelf. The fins and the fin holder can be constructed from plastic resins, utilizing an injection molding process.

In accordance with another aspect of the invention, the system includes a series of sector-shaped containers. The containers are adapted for storage of materials therein and for placement on the shelf. Handle means are associated with each of the containers, and are adapted to be grasped by a user to facilitate accessibility of material components of the containers and of handling of the containers.

At least a subset of the containers include lid means for substantially enclosing the material components within the containers. The lid means are located at the top portion of the containers, and have spout means for facilitating dispensing of the material components within the containers.

Each of the containers includes a top, bottom, sidewalls and front. A handle portion is provided which is oriented toward the container rear. The handle portion includes a handle recess duplicated on either side of the handle portion. The handle portion also includes a recessed top and recessed bottom. The top and the bottom collectively transition areas between the handle portion and a main construction of the container.

The system includes a lid associated with at least one of the containers. The lid has a spout for dispensing material components from the container. The spout includes a pouring edge oriented toward a front of the lid. A flange portion extends along two equal legs of a

triangular shape of the spout opening. An access portion is formed by a recessed area within the lid. The access portion facilitates access for users fingertips.

The lid includes flap anchor holes and a flap anchor flange. The lid also includes a flap anchor recess. A spout flap is installable on the lid. In combination, the spout flap forms a
5 completed lid embodiment. The spout flap includes a spout flap front, rear, edge and top.

The spout flap is inserted onto a top of the lid by press fitting the flap anchors into the flap anchor holes. The flap seal is engagable with the spout flange, so as to provide a seal around a perimeter of the spout opening. A user, when addressing the lid as installed on the storage container, uses the access portion to insert fingers under the spout flap edge located at a
10 front of the spout. In this manner, the spout flap is disengaged from the spout flange. The spout hinge can be a living hinge, allowing the spout flap to be transitioned upwardly and toward an outer edge of the storage container. The spout flap rests in the flap anchor recess.

The system includes a series of stackable storage containers. Each storage container is constructed from plastic resins, utilizing an injection molding process. The storage
15 containers are of a shape and size so as to fit between elements of the segregating means when the storage containers are placed on the shelf.

BRIEF DESCRIPTION OF THE DRAWINGS

In the drawings:

FIG. 1 is a side elevational view of a typical Lazy Susan device as mounted in a
20 cabinet environment;

FIG. 2 is a side perspective view of the Lazy Susan shelf in isolation employing the containers and storage organizer of the present invention;

FIG. 3 is a side elevational view of a fin of the present invention;

FIG. 4 is a side perspective view of a fin holder of the present invention;

FIG. 5 is a top view of a fin holder as shown in FIG. 4 in the open condition;

FIG. 6 is the fin holder of FIG. 5 in the closed condition;

FIG. 7 is a side perspective view of a storage container of the present invention

5 without a lid;

FIG. 8 is a side elevational view of a storage container of the present invention

without a lid;

FIG. 9 is a side elevational view of the storage container of the present invention

without a lid, and also revealing the handle portion as seen on end;

10 FIG. 10 is a partial cross-section view of a portion of the storage container of the present invention, revealing details of the sidewall and bottom side construction;

FIG. 11 is a side perspective view of a storage container of the present invention

without a lid and with a reduced height;

FIG. 12 is the storage container as shown in FIG. 11 in side elevational view;

15 FIG. 13 is the storage container of FIG. 12 in side elevational view showing the end view of the handle portion;

FIG. 14 is a bottom view of the storage container of the present invention;

FIG. 15 is a side perspective view of a lid for a storage container of the present invention without the spout installed;

20 FIG. 16 is a side perspective view of a spout of the present invention, which is mountable onto the lid;

FIG. 17 is a top view of the spout of FIG. 16;

FIG. 18 is a side cross-sectional view of the spout of FIG. 17.

DESCRIPTION OF THE PREFERRED EMBODIMENT

The storage containers and organizer system of the present invention are directed towards use on Lazy Susan devices. Lazy Susans are commonly found in the kitchen environment, although not exclusively so. They have applications in other household areas and potentially in commercial or industrial settings as well. Therefore, the teachings of the present invention should not be limited to just the applications in the kitchen, although they do represent the most popular usage.

Turning now to FIG. 1, a typical Lazy Susan product is shown as installed in a kitchen cabinet. The Lazy Susan 10 occupies the space in a cabinet 12. In this case, cabinet 12 is a floor-mounted type, although the present invention is compatible with cabinets mounted above the counter-top or possibly even in floor-to-ceiling applications. The Lazy Susan is comprised basically of a number of shelves 14 which are rotatably mounted about a support 16. The support 16 is fixed into place in the cabinet by means of a top mount 18 and a bottom mount, which is not viewable in the drawings.

It is also noted that the Lazy Susan shelf 14 typically has a lip 22, which provides a barrier to prevent the goods that are placed on the Lazy Susan shelves from falling off when it is rotated. As may be appreciated from the drawing, the Lazy Susan product which in this case has full round shelves, is positioned compatibly to allow the user to access the portion of the Lazy Susan shelf 14 that is rotated toward the front portion of the cabinet 12. Thus, when the cabinet door is opened, the goods are made accessible no matter if they are initially located to the rear of the cabinet 12.

The Lazy Susan shown in FIG. 1 is an exemplar of a common type, but it is by no means the only Lazy Susan product upon which the present invention may be deployed. Lazy

Susan applications are known where the shape of the shelves varies from a kidney shape to a "pie-cut" shape, as well as other designs. The teachings of the present invention would apply equally to all compatible variations of such Lazy Susans.

FIG. 2 discloses the embodiments of the present invention. Specifically, a Lazy Susan shelf 30 is shown with storage surface 32 that extends around the hub 36 and terminates in a portion of the Lazy Susan at the outer edge, forming a lip 34. Although this particular illustration does not show the shelf 14 in the installed condition with the support 16 running through the center of the shelf 14, it is understood that it would be applicable to the conventional-type installations as described above. The embodiments of the present invention include the fins 40, which are mounted onto the fin holder 42. The storage containers 44 are shown in a typical installed position within the sector-shaped area defined by the fins 40. The storage container 44 further comprises the container 46 and a lid 48. As also may be appreciated from the drawing, the storage container 44 may be moved to different heights to allow for the storage of more and different goods in a discreet manner.

Turning now to FIG. 3 for more detail, a fin 40 of the present invention is shown with the fin outer end 50 and the fin inner end 52. It also includes the fin top 54 and the fin bottom 56. At the inner end 52, the fin mount 58 is located. In close proximity, the fin notch 60 is also shown. The construction of the fin 40 generally is consistent with its function as a "fence" in keeping the storage containers 44 of the present invention in predesignated areas. In order to reinforce the substantially vertical structure of the fins 40, it is provided with a series of vertical ribs 62, a top rib 64, and a bottom rib 66. These components enhance the rigidity of the fin 40 itself. At the fin outer end 50, there is the lip engagement 68 with slot 70 and retainer 72.

The details relative to the fin holder 42 are shown in FIGS. 4 – 6. Accordingly, the fin holder 42 is comprised of the body 80 and has a series of vertical receivers 82 at spaced intervals along the length of the body 80. On the interior side of the vertical receiver 82 is a receiver rib 84. In between the vertical receivers 82 is a web portion 86, which web portions 86 collectively connect with each vertical receiver 82 and form the body 80 of the fin holder 42. As is shown more clearly in FIGS. 5 and 6, there is the latch 88, which is comprised of latch components 88A and 88B. These are plastic projections that emanate from the respective vertical receivers 82. Also included is the lock 90, which provides for affirmative engagement in combination with the latch 88A and latch 88B and all are located at the web end 94.

It can be appreciated, by resort to FIGS. 5 and 6, that where the fin holder in FIG. 6 is in the open position, when the web ends are brought together as in FIG. 6, the latches engage and the lock 90 serves to retain the latches in the engaged condition. In this manner, a fin holder 42 that is a closed tubular construction is formed with center 92. The center 92 comprises a through hole of a diameter that is compatible with installation onto the support of a Lazy Susan product.

In actual use, the fin holder 42 may be attached to a support 16 for a Lazy Susan by spreading the body open enough for the fin holder 42 to be applied to the support 16. Once done, it may be latched and put into the closed condition so that it is affirmatively retained on the support 16 and in a position just above the center hub of a Lazy Susan shelf 14. In this condition, the receiver ribs 84 contact the support 16 and help to retain it in position.

The fin holder 42, once installed, can receive the fin mount 58 of the fins 40. At the outer end 50, the fin 40 engages the lip 34 of the Lazy Susan shelf. The lip engagement portion of the fin 68 has slot 70 that is compatible with the configuration of a lip of a Lazy

Susan. Additionally, retainer 72 extends below the bottom edge of the lip and has a barbed effect in terms of retaining the lip engagement portion to the bottom of the lip as well.

Thus, the fin 40 is seated onto the storage surface of the Lazy Susan shelf 14 with the bottom rib riding substantially thereon and with both of the fin outer ends and fin inner ends being engaged. The vertical ribs 62 and the top rib 64 are more substantial by design in order to maintain the rigidity of the fin top 54.

The angle defined by the fin 40 when installed in the fin holder 42 is set by the spacing of the vertical receivers 12 on the fin holder 42 itself. Thus, the storage container 44 of the present invention, with its sector shape, is a consideration when setting the angle on the fin holder 42 by defining the area that is to be fenced in by the fins 40. The desire and intention would be to provide enough proximity between the fins 40 and the storage containers 44 to obtain the benefits in managing the storage containers 44; preventing them from tipping over, and keeping them retained in an orderly fashion. It is noted that the fin 40 and fin holder 42 of the present invention are preferentially constructed from plastic resins, using an injection molding process. Variations on the present invention, however, could be envisioned using other materials of construction, such as formed metal without departing from the spirit and scope of the present invention.

Continuing now to FIGS. 7 – 9, a container 44 of the present invention is shown in more detail. More specifically, the container includes container top 100, container bottom 102 and container sidewalls 103. The container is also oriented with a container front 104 and a container rear 106. Along the top 100 is the container lip 108. Oriented towards the container rear 106 is the handle portion 110. The handle portion 110 further comprises the handle recess 112, which is duplicated on either side of the handle portion. There is also a handle recess top

116 and handle recess bottom 118 both of which collectively transition the areas between the handle portion 110 and the main construction of the container 44. Lastly, the container includes the foot 114.

More definitive disclosure of the construction of the container 44 is shown in FIG.

5 10 where the container lip 108 is further comprised of container lip edge 120, container lip slot 122, and container lip radius 124. As will be noted further, this design beneficially serves to impart a retaining function when the lid of the storage container 44 is installed. FIG. 10 also discloses the bottom radius 126 which transitions from the sidewall 103 into the bottom side 128 of the container. In this view, the foot 114 can be seen more clearly and may be appreciated as
10 the point upon which the bottom side of the container makes contact with the shelf surface.

FIG. 14 reveals the foregoing details of the container 44 as viewed from the bottom. The transitions between the handle portion and the sidewalls of the container 44, as well as the general outline of the foot may be better understood. The lid 48, as shown in FIG. 15, is supplied as part of the storage container 44. It includes the lid front 130, the lid rear 132 and
15 spout 134. The spout 134 is defined generally by the spout opening 136, which has the pouring edge 138 oriented toward the lid front. The spout 134 further has a flange portion 140 extending along the two equal legs of the triangular shape of the spout opening. There is also an access portion 142, which is a recessed area in the lid 48, which compatibly provides access for the user's fingertips, which will be discussed below. The lid 48 also includes the flag anchor hole
20 144 and the flap anchor flange 148. These two features are shown as areas in a recess on the boundary of the spout opening opposite the access portion. Lastly, flap anchor recess 146 is shown which is only slightly less recessed than the top surface of the lid.

The spout flap 150, as shown in FIG. 16, is actually installable onto the lid 48 and in combination forms the completed lid embodiment. As shown in FIG. 16, the spout flap includes the spout flap front 152, the spout flap rear 154, and the spout flap edge 156. The top of the spout flap is shown as 158. In more detail, the spout flap is shown in FIGS. 17 and 18 with the flap anchor 160, the flap seal 162 and the flap hinge 164.

In use, the spout flap 150 is inserted onto the top of the lid 48 by press fitting the flap anchors 160 into the flap anchor holes 144. The flap seal 162 is engageable with the portions of the spout, in particular the spout flange 140, to provide a seal around the perimeter of the spout opening 136. The user, when addressing the lid 48 as installed on the storage container 44, may use the access portion 142 to insert the fingers under the spout flap edge 156 located at the front of the spout, and to disengage the spout flap from the spout flange. The spout hinge 164 is a so-called living hinge and allows the spout flap to be transitioned upwardly and toward the outer edge of the storage container 44 where it may be allowed to rest in the flap anchor recess 146. The effect, in combination, is to provide a lid 48 that can be installed onto a storage container 44 of the present invention which has an integrally provided spout, lid and a configuration that allows the storage container 44 to be used as a vessel that is not only compatible with storage of goods on a Lazy Susan shelf, but which may be withdrawn easily through use of the handle portion, and to provide a function as a serving vessel.

As distinguished from the prior art, the user is able to grasp the storage container 44 of the preferred embodiment easily and to manipulate the storage container 44, if so desired, into a pouring function. By placement of the spout opening and flap towards the front of the storage container 44, the utility of the storage container 44 is greatly enhanced. While prior art versions of containers designed for circular shelves for Lazy Susan products have focused on the

efficiency of storage space utilization, the present invention provides substantial efficiency, although there has been a slight tradeoff to improve the handling and friendliness of the container relative to the needs of the end user.

In another embodiment of the present invention, as shown in FIGS. 11 and 12, a storage container 44 with a reduced height is provided. In this fashion, the storage containers can be stacked one on top of the other in vertical fashion to further increase the utility of the storage container concept of the present invention. In the drawings, the reduction in height is calibrated to be approximately one-half that shown for the preferred embodiment, although it may be appreciated that any particular height may be used that would be compatible with the organizer system herein without departing from the scope and intention of the present invention.

The storage container 44, much like the fin 40, is preferentially constructed from a plastic resin used in a plastic-injection molding process. This preference would by no means limit the scope of the application of the present invention to a plastic construction since other materials of construction may be reasonably envisioned, such as glass, ceramic or formed metal which would accomplish the same needs and means as shown in the embodiments.

While the invention has been described in connection with certain specific embodiments thereof, it is to be understood that this is by way of illustration and not of limitation, and the scope of the appended claims should be construed as broadly as the prior art will permit.